Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269

Scaled data based on original data using

LM-79-2019 Approved Method: Electrical and Photometric Measurements of Solid-State Lighting Products

Test Report Prepared for

Cooper Lighting Solutions

Brand: METALUX

Report Number:

Luminaire Tested: EHBR1-18-UNV-ASM-L840-UPL30

Issue Date: 3/20/2026

Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269

Scaled Data Report

Test Information

Test Method:	LM-79-2019
Report Number:	
	REPORT IS A COMBINATION OF REPORTS P1431680 AND P1431635
Test Lab:	INNOVATION CENTER
Issue Date:	3/20/2026
Manufacturer:	COOPER LIGHTING SOLUTIONS
Product Line:	METALUX
Catalog Number:	EHBR1-18-UNV-ASM-L840-UPL30
Description:	Elevate Round Highbay at, 18000 lumens, 4000K 80CRI LEDs with ASM lens
Light Source:	-
Ballast/Driver:	-

Summary

Lumens per Lamp:	N/A
Luminaire Lumens:	21402.0 lumens
Efficiency:	N/A
Efficacy:	183.4 lumens/watt
Spacing Criteria (0/90/45):	0.84 / 0.99 / 0.92
Luminous Opening:	Vertical Cylinder (Dia: 1.71' x H: 0.1')
CIE Type:	Semi-Direct

Input Watts (W):	116.7
Input Voltage (V):	NR
Input Current (Ain):	NR
Voltage Rise (V):	NR
Power Factor:	NR
Total Harmonic Distortion (THDi):	NR
Frequency (hertz):	60
Stabilization Time:	NR
Operation Time:	NR
Ambient Temperature (°C):	NR
Test Distance:	24 FT

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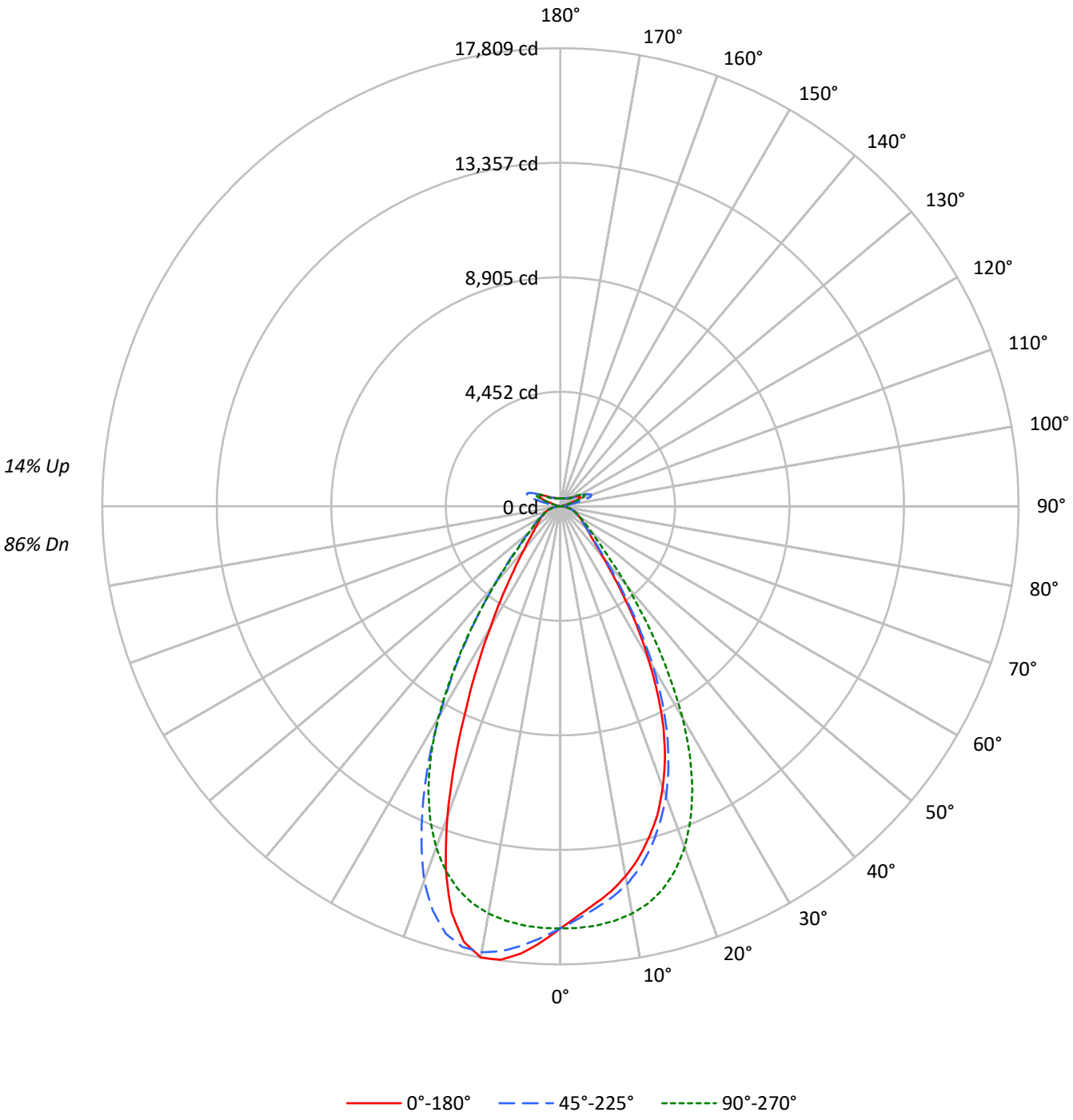
Scaled Data Report

TEST NUMBER:
CATALOG NUMBER: EHBR1-18-UNV-ASM-L840-UPL30

Luminous Intensity Polar Plot



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TEST NUMBER:
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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20				20				20			20			20			20
RC	80				70				50			30			10			0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	0
RCR																		
0	116	116	116	116	111	111	111	111	103	103	103	96	96	96	89	89	89	86
1	108	105	102	99	104	101	98	96	94	92	90	88	87	85	83	81	80	77
2	101	95	90	86	98	92	88	84	87	83	80	81	79	76	77	74	72	70
3	95	87	81	76	91	84	79	74	80	75	71	75	72	69	71	68	66	63
4	89	80	73	68	86	78	72	67	74	69	65	70	66	62	66	63	60	58
5	83	74	67	62	81	72	65	61	68	63	59	65	60	57	62	58	55	53
6	78	68	61	56	76	67	60	55	63	58	54	61	56	52	58	54	51	49
7	74	63	56	52	72	62	56	51	59	54	50	57	52	48	54	50	47	45
8	70	59	52	48	68	58	51	47	55	50	46	53	49	45	51	47	44	42
9	66	55	49	44	64	54	48	44	52	47	43	50	45	42	48	44	41	39
10	63	52	45	41	61	51	45	41	49	44	40	47	43	39	46	42	38	37

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°	135°	180°
0°	77076	77076	77076	77076	77076
5°	72632	73480	76607	80281	81725
10°	68740	70195	75665	82859	83823
15°	63497	65193	73431	82009	77898
20°	56558	58463	68676	75382	62464
25°	47398	49191	60784	63229	43279
30°	35463	37519	49354	48862	28156
35°	23608	25034	35399	34827	18234
40°	14889	15912	22886	23034	12568
45°	10608	11050	14521	15145	9735
50°	8836	8907	10783	11065	8273
55°	7800	7819	8804	9037	7536
60°	7222	7160	7624	7785	7179
65°	6894	6832	6950	7086	6923
70°	6696	6580	6587	6714	6783
75°	6365	6174	6160	6378	6563
80°	5792	5389	5412	5792	6195
85°	4219	3500	3500	4004	4422

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 112.5°
Vertical Angle: 45°
Luminance: 20416 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	1560.6	7.3
10°-20°	4245.7	19.8
20°-30°	4979.4	23.3
30°-40°	3462.8	16.2
40°-50°	1720.9	8.0
50°-60°	1029.3	4.8
60°-70°	724.4	3.4
70°-80°	466.7	2.2
80°-90°	153.6	0.7
90°-100°	81.1	0.4
100°-110°	532.7	2.5
110°-120°	984.6	4.6
120°-130°	584.7	2.7
130°-140°	353.0	1.6
140°-150°	243.7	1.1
150°-160°	158.4	0.7
160°-170°	90.4	0.4
170°-180°	29.9	0.1
0°-30°	10785.7	50.4
0°-40°	14248.5	66.6
0°-60°	16998.7	79.4
0°-90°	18343.4	85.7
90°-120°	1598.4	7.5
90°-150°	2779.9	13.0
90°-180°	3059.0	14.3
0°-180°	21402.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	16413	16413	16413	16413	16413	
5°	15508	15689	16357	17141	17450	1455
15°	13321	13677	15406	17205	16343	3715
25°	9465	9824	12139	12627	8643	4271
35°	4333	4595	6497	6392	3347	2760
45°	1716	1788	2350	2450	1575	1387
55°	1054	1057	1190	1221	1018	956
65°	720	713	725	740	723	715
75°	448	435	434	449	462	473
85°	145	120	120	138	152	149
90°	22	61	22	65	24	18
95°	38	138	43	118	40	36
105°	185	930	245	992	123	248
115°	851	1100	1048	1218	894	784
125°	614	589	670	652	701	560
135°	448	451	423	472	488	351
145°	371	388	382	391	399	235
155°	328	339	339	339	353	153
165°	310	318	317	316	325	88
175°	309	314	314	312	318	30
180°	313	313	313	313	313	

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TEST NUMBER:
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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
0°	16412.8	16412.8	16412.8	16412.8	16412.8	16412.8	16412.8	16412.8	*16412.8*
2.5°	15925.6	15936.1	16047.5	16192.4	16403.2	16615.3	16787.0	16900.3	*16956.3*
5°	15508.0	15565.8	15689.2	15955.5	16356.8	16781.5	17141.3	17376.7	*17449.6*
7.5°	15101.1	15134.6	15341.2	15677.5	16245.7	16907.4	17442.0	17716.8	*17783.9*
10°	*14604.7*	*14680.7*	*14914.0*	*15310.7*	*16076.1*	*16986.8*	*17604.5*	*17801.4*	*17809.4*
12.5°	14020.5	14121.2	14362.2	14862.6	15805.6	16958.5	17550.0	17485.4	*17338.5*
15°	13321.3	13409.6	13677.1	14257.5	15405.5	16790.7	17205.0	16679.0	*16342.6*
17.5°	12566.0	12646.1	12878.4	13517.6	14841.7	16476.8	16484.8	15444.3	*14809.6*
20°	11624.3	11687.1	12015.8	12643.0	14115.0	15973.3	15493.2	13590.0	*12838.1*
22.5°	10622.2	10681.0	10973.0	11625.8	13204.0	15294.4	14112.2	11724.6	*10698.8*
25°	9465.3	9497.3	9823.5	10413.8	12138.6	14462.5	12626.7	9692.1	*8642.7*
27.5°	8163.8	8218.2	8559.6	9162.5	10885.3	13408.1	11044.8	7920.0	*6951.8*
30°	6821.3	6911.5	7216.8	7756.6	9493.3	12056.4	9398.5	6307.3	*5415.7*
32.5°	5568.4	5633.3	5850.9	6415.0	7934.8	10731.5	7817.5	5053.8	*4298.6*
35°	4333.0	4398.0	4594.6	5148.6	6496.9	9073.8	6392.0	3971.1	*3346.6*
37.5°	3312.2	3427.0	3553.1	4002.8	5098.7	7507.6	5095.4	3197.7	*2714.5*
40°	2580.6	2599.1	2757.9	3045.6	3966.8	5870.3	3992.3	2552.6	*2178.4*
42.5°	2065.7	2115.9	2184.2	2399.6	3005.6	4488.7	3138.0	2095.0	*1850.3*
45°	1716.4	1736.1	1787.8	1932.5	2349.5	3303.2	2450.4	1767.5	*1575.1*
47.5°	1501.6	1493.0	1526.2	1634.5	1913.4	2552.9	1986.0	1516.0	*1381.2*
50°	1316.9	1311.7	1327.4	1399.7	1607.1	1958.9	1649.0	1323.4	*1232.9*
52.5°	1173.5	1178.1	1179.7	1224.6	1380.6	1597.6	1404.3	1179.4	*1118.4*
55°	1054.1	1059.9	1056.6	1089.8	1189.8	1343.1	1221.2	1060.6	*1018.4*
57.5°	960.8	956.5	951.9	969.8	1044.9	1139.3	1060.6	959.3	*931.3*
60°	868.2	864.2	860.8	872.5	916.5	986.7	935.9	871.0	*863.0*
62.5°	788.8	786.3	786.0	783.9	817.7	862.0	827.6	791.6	*784.5*
65°	719.6	716.8	713.1	709.7	725.4	766.6	739.6	720.2	*722.6*
67.5°	650.3	650.3	643.8	638.6	654.0	675.5	663.8	652.8	*655.5*
70°	587.5	587.8	577.4	573.4	578.0	601.1	589.1	590.6	*595.2*
72.5°	520.1	512.7	505.0	504.7	505.3	523.2	519.2	522.9	*527.8*
75°	448.4	439.8	434.9	429.3	433.9	447.5	449.3	454.6	*462.3*
77.5°	379.2	365.9	361.9	359.2	356.1	371.5	377.3	384.4	*395.8*
80°	304.7	290.2	283.5	279.5	284.7	291.8	304.7	309.9	*325.9*
82.5°	225.3	214.5	206.2	205.9	208.4	214.8	225.9	235.7	*245.0*
85°	145.0	127.7	120.3	123.1	120.3	130.2	137.6	149.3	*152.0*
87.5°	52.3	40.9	39.1	43.1	42.2	45.2	51.7	56.3	*56.6*
90°	22.3	35.9	61.3	39.3	22.3	37.9	65.3	35.7	*24.5*
92.5°	32.5	54.5	98.6	51.1	29.1	51.4	92.4	47.5	*33.0*
95°	37.6	63.0	137.5	68.1	43.0	63.3	117.8	52.6	*39.8*
97.5°	48.0	69.8	157.9	83.3	66.7	78.5	133.1	56.0	*48.2*
100°	63.3	81.6	246.0	102.3	88.7	88.7	243.2	64.5	*55.0*
102.5°	107.3	173.1	522.1	192.1	134.5	173.7	563.7	129.3	*66.9*
105°	185.3	364.6	930.5	402.2	244.6	397.4	992.4	334.3	*123.1*
107.5°	320.8	652.6	1227.3	712.2	463.1	741.3	1278.7	659.6	*287.4*
110°	598.7	866.1	1286.6	978.2	741.0	1036.1	1395.6	903.6	*582.3*

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Scaled Data Report

TEST NUMBER:
CATALOG NUMBER: EHBR1-18-UNV-ASM-L840-UPL30

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
112.5°	808.8	930.5	1232.4	1079.9	964.7	1154.7	1363.4	1001.8	*805.9*
115°	851.1	894.9	1100.2	1054.5	1048.0	1137.8	1217.7	998.5	*894.0*
117.5°	822.3	817.0	934.2	948.0	1012.4	1041.2	1051.7	937.5	*899.1*
120°	761.3	727.2	780.0	827.7	914.1	902.3	885.9	847.7	*848.3*
122.5°	685.1	644.4	668.5	704.3	790.8	765.3	748.7	756.5	*778.8*
125°	614.2	573.3	589.1	597.9	670.5	645.0	652.4	678.5	*701.2*
127.5°	551.6	524.1	533.2	523.3	569.1	557.2	582.9	612.5	*631.7*
130°	509.2	485.5	497.9	474.5	496.5	499.6	533.8	558.5	*570.7*
132.5°	473.9	458.7	473.2	444.7	451.2	464.3	496.9	518.2	*525.2*
135°	448.5	435.2	451.2	424.7	422.7	442.3	471.8	485.7	*488.0*
137.5°	426.8	415.2	431.5	411.4	406.0	425.8	448.1	458.9	*455.8*
140°	407.1	397.3	414.8	399.6	396.2	415.9	426.1	438.5	*435.8*
142.5°	385.7	378.9	399.9	389.7	386.3	404.4	409.4	418.5	*415.4*
145°	371.1	366.0	388.3	382.9	381.5	394.8	391.1	403.3	*398.8*
147.5°	358.1	354.7	375.1	373.1	373.1	382.9	377.8	388.3	*383.8*
150°	346.9	343.5	363.5	361.5	363.2	370.0	362.9	375.1	*374.0*
152.5°	335.6	331.9	350.2	348.2	349.9	356.7	349.9	363.8	*362.4*
155°	327.7	324.0	339.0	338.4	338.7	342.1	338.7	352.5	*352.8*
157.5°	321.9	319.6	331.1	330.8	330.8	332.8	331.1	343.4	*343.7*
160°	317.5	315.5	325.3	325.0	323.6	327.0	325.6	336.1	*336.4*
162.5°	313.0	311.0	322.5	320.8	320.8	320.8	319.8	330.2	*330.8*
165°	310.2	309.9	318.1	318.1	316.7	318.4	315.6	322.9	*325.3*
167.5°	310.2	308.5	317.0	317.0	315.6	313.9	314.5	320.6	*322.9*
170°	309.1	308.8	315.6	314.2	312.5	312.8	311.8	317.8	*320.1*
172.5°	309.7	309.4	316.5	314.8	313.5	313.5	311.0	315.3	*319.3*
175°	308.7	308.4	313.8	313.8	314.1	312.7	311.6	314.2	*318.2*
177.5°	310.7	310.4	313.8	313.8	312.4	313.0	313.6	316.2	*321.9*
180°	313.0	313.0	313.0	313.0	313.0	313.0	313.0	313.0	*313.0*

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Scaled Data Report

TEST NUMBER: CATALOG
CATALOG NUMBER: EHBR1-18-UNV-ASM-L840-UPL30

CIE UGR TABLE:

Reflectances:											
	Ceiling	0.7	0.7	0.5	0.5	0.3	0.7	0.7	0.5	0.5	0.3
	Wall	0.5	0.3	0.5	0.3	0.3	0.5	0.3	0.5	0.3	0.3
	Reference plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Room dimensions		Viewed crosswise					Viewed endwise				
X=2H	Y=2H	14.45	15.46	15.05	16.04	16.70	15.22	16.22	15.82	16.81	17.47
	3H	16.26	17.16	16.88	17.76	18.46	16.77	17.67	17.39	18.27	18.97
	4H	16.99	17.84	17.63	18.45	19.16	17.41	18.26	18.05	18.87	19.58
	6H	17.56	18.33	18.21	18.96	19.68	17.91	18.68	18.55	19.31	20.03
	8H	17.74	18.47	18.40	19.11	19.84	18.06	18.79	18.72	19.44	20.17
	12H	17.84	18.54	18.50	19.17	19.92	18.14	18.84	18.80	19.47	20.23
4H	2H	14.96	15.80	15.60	16.41	17.12	15.59	16.43	16.22	17.04	17.75
	3H	16.99	17.69	17.64	18.34	19.07	17.39	18.09	18.04	18.74	19.47
	4H	17.86	18.48	18.52	19.14	19.90	18.18	18.80	18.84	19.46	20.22
	6H	18.55	19.09	19.23	19.77	20.55	18.81	19.35	19.49	20.03	20.81
	8H	18.77	19.28	19.46	19.96	20.74	19.01	19.51	19.70	20.20	20.98
	12H	18.90	19.35	19.61	20.06	20.85	19.12	19.57	19.83	20.28	21.07
8H	4H	18.11	18.62	18.80	19.30	20.08	18.41	18.92	19.10	19.60	20.38
	6H	18.93	19.34	19.65	20.06	20.85	19.18	19.59	19.90	20.31	21.10
	8H	19.23	19.59	19.96	20.33	21.13	19.46	19.82	20.20	20.56	21.36
	12H	19.43	19.75	20.16	20.46	21.33	19.64	19.96	20.37	20.68	21.55
12H	4H	18.11	18.56	18.82	19.27	20.06	18.42	18.87	19.13	19.58	20.36
	6H	18.97	19.33	19.70	20.06	20.87	19.22	19.59	19.96	20.32	21.12
	8H	19.31	19.63	20.04	20.34	21.21	19.55	19.87	20.28	20.58	21.45

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LM-79-2019: Approved Method: Electrical and Photometric Measurements of Solid-State Lighting Products

Report Prepared for

Cooper Lighting Solutions

Metalux

Report Number: SP1-2506-472-1

Test Date: 07/30/2025

Luminaire Tested: EHBR-60-L840-N

Data in this report applies to families of products including EHBR-60-L840-N

Report Generated By FNC07603 / LDUCLS01DT446
Version: v7.04

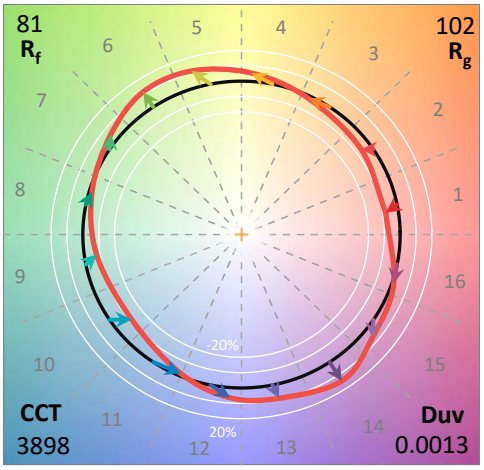
Test Information

Test Method:	LM-79-2019
Report Number:	SP1-2506-472-1
Test Lab:	COOPER LIGHTING SOLUTIONS
Photometer:	SP1 - 76IN SPHERE
Measurement Geometry:	4π
Issue Date:	08/05/2025
Manufacturer:	COOPER LIGHTING SOLUTIONS
Product Line:	Metalux
Catalog Number:	**EHBR-60-L840-N**
Description:	Elevate Round Highbay at, 60000 lumens, 4000K 80CRI LEDs with N lens

Spectral Parameters

CCT (K):	3898
CIE u':	0.2263
CIE v':	0.5052
Duv:	0.0013
CIE x:	0.3861
CIE y:	0.3831
CIE z:	0.2308
Peak Wavelength (nm):	630
Dominant Wavelength (nm):	578
Purity:	30.85729
Rf:	80.7
Rg:	102.1

CRI (Ra):	82.1				
R1:	84.4	R9:	38.5		
R2:	83.5	R10:	58.9		
R3:	80.8	R11:	83.6		
R4:	83.9	R12:	54.2		
R5:	82.1	R13:	82.8		
R6:	77.3	R14:	88.2		
R7:	86.4	R15:	81.2		
R8:	78.3				



Test Conditions

Stabilization Time:	42M
Operation Time:	1H 42M
Sphere Temperature (°C):	25.0

REPORT NUMBER: SP1-2506-472-1

Measurement and Test Equipment			
Instrument	Identification Number	Calibration Date	Calibration Due Date
Photometer	76INCH SPHERE IN0058	6/16/2025	12/16/2025
Power Meter	XITRON INXT2011004	1/21/2025	1/21/2026
AC Power Source	CHROMA 61603 IN0063	10/22/2024	10/22/2025
DC Power Source	AGILENT E3634A IN0208	10/22/2024	10/22/2025
Sphere Thermometer	ONSET IN0085	10/22/2024	10/22/2025
Room Thermometer	ONSET IN0046	10/22/2024	10/22/2025

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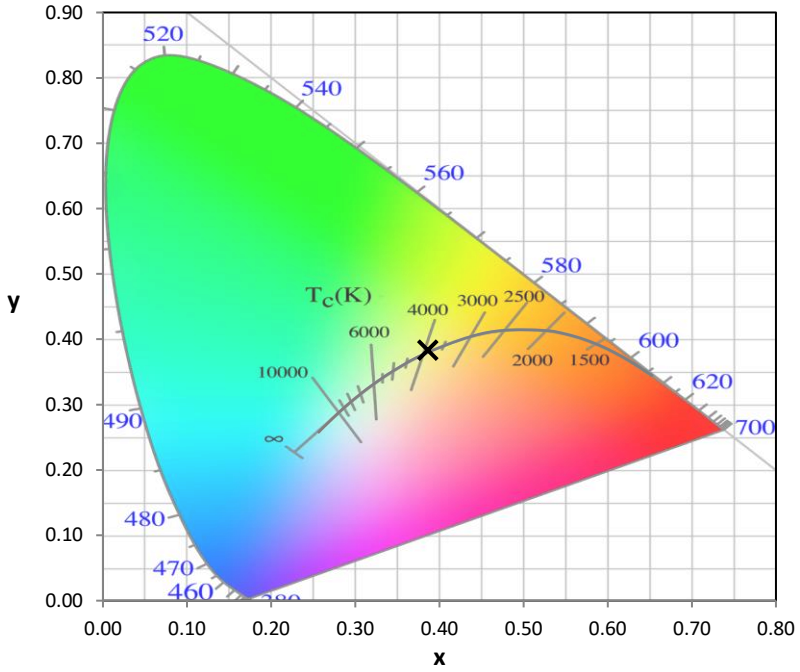
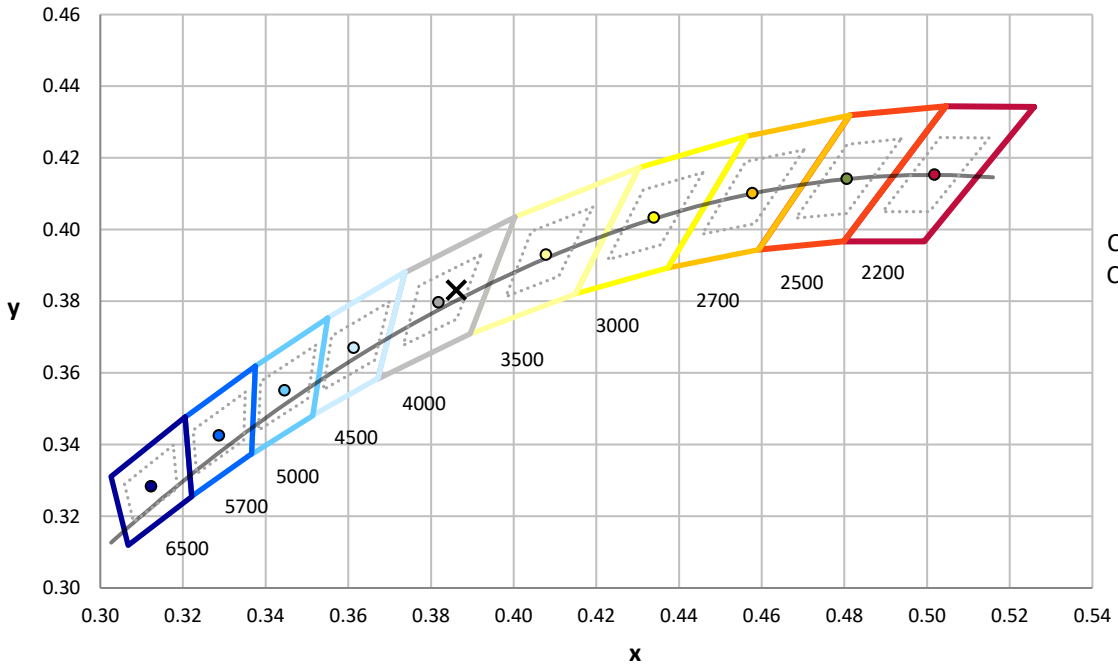
CIE 1931 Chromaticity Diagram



CIE 1931 Chromaticity Diagram with 2017 ANSI 7-Step and 4-Step Quadrangles



CCT = 3898K
CIE x = 0.3861
CIE y = 0.3831
Duv = 0.0013

Point lies inside the ANSI 4000K 4-step quadrangle

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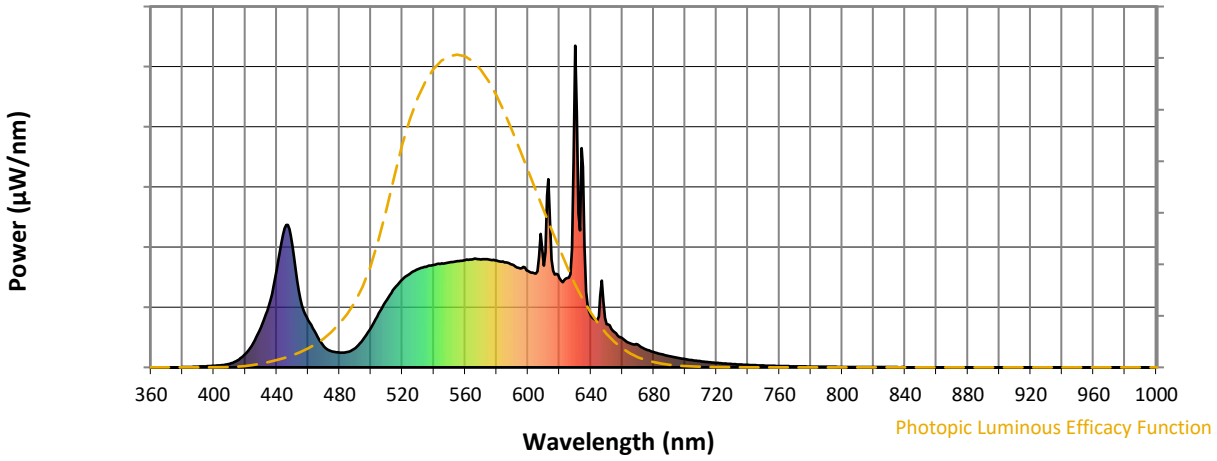
Photopic Flux vs. Wavelength



Photopic Lumens: NR

λ (nm)	Power W^/nm	Lumens (ϕ/nm)	λ (nm)	Power W^/nm	Lumens (ϕ/nm)	λ (nm)	Power W^/nm	Lumens (ϕ/nm)	λ (nm)	Power W^/nm	Lumens (ϕ/nm)	λ (nm)	Power W^/nm	Lumens (ϕ/nm)
360	0	NR	490	60	NR	620	277	NR	750	6	NR	880	0	NR
365	0	NR	495	87	NR	625	278	NR	755	5	NR	885	0	NR
370	0	NR	500	124	NR	630	1000	NR	760	4	NR	890	0	NR
375	0	NR	505	168	NR	635	623	NR	765	4	NR	895	0	NR
380	1	NR	510	209	NR	640	162	NR	770	3	NR	900	0	NR
385	1	NR	515	246	NR	645	158	NR	775	3	NR	905	0	NR
390	2	NR	520	273	NR	650	134	NR	780	2	NR	910	0	NR
395	4	NR	525	292	NR	655	109	NR	785	2	NR	915	0	NR
400	5	NR	530	305	NR	660	91	NR	790	2	NR	920	0	NR
405	7	NR	535	313	NR	665	75	NR	795	2	NR	925	0	NR
410	11	NR	540	319	NR	670	70	NR	800	1	NR	930	0	NR
415	21	NR	545	323	NR	675	56	NR	805	1	NR	935	0	NR
420	42	NR	550	326	NR	680	47	NR	810	1	NR	940	0	NR
425	76	NR	555	330	NR	685	41	NR	815	1	NR	945	0	NR
430	125	NR	560	333	NR	690	35	NR	820	1	NR	950	0	NR
435	193	NR	565	336	NR	695	30	NR	825	1	NR	955	0	NR
440	302	NR	570	336	NR	700	26	NR	830	1	NR	960	0	NR
445	432	NR	575	335	NR	705	22	NR	835	1	NR	965	0	NR
450	380	NR	580	332	NR	710	19	NR	840	0	NR	970	0	NR
455	213	NR	585	326	NR	715	16	NR	845	0	NR	975	0	NR
460	147	NR	590	319	NR	720	14	NR	850	0	NR	980	0	NR
465	104	NR	595	307	NR	725	12	NR	855	0	NR	985	0	NR
470	65	NR	600	299	NR	730	10	NR	860	0	NR	990	0	NR
475	50	NR	605	291	NR	735	9	NR	865	0	NR	995	0	NR
480	46	NR	610	317	NR	740	8	NR	870	0	NR	1000	0	NR
485	47	NR	615	336	NR	745	7	NR	875	0	NR			

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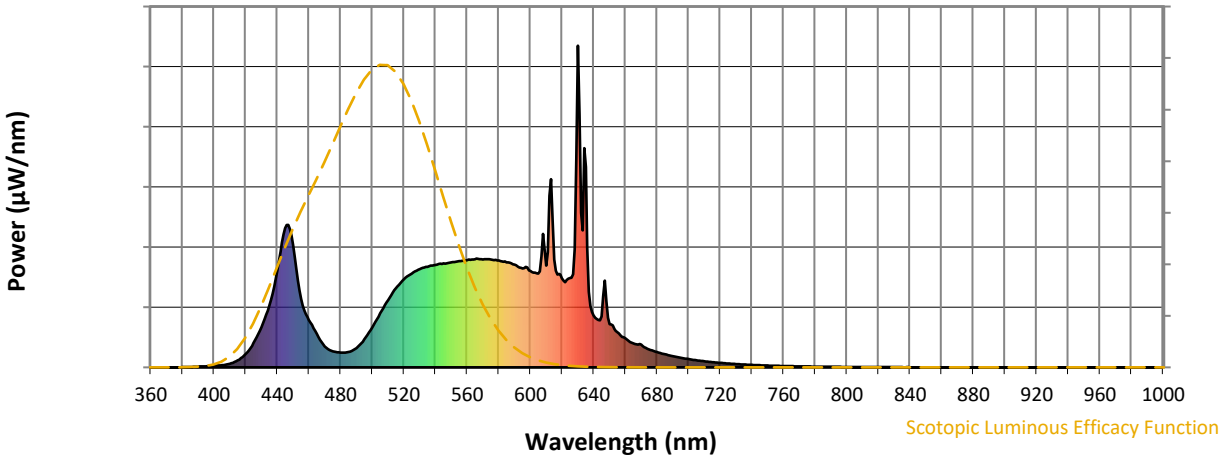
Scotopic Flux vs. Wavelength



Scotopic Lumens: NR **S/P: 1.55**

λ (nm)	Power W^/nm	Lumens (ϕ/nm)	λ (nm)	Power W^/nm	Lumens (ϕ/nm)	λ (nm)	Power W^/nm	Lumens (ϕ/nm)	λ (nm)	Power W^/nm	Lumens (ϕ/nm)	λ (nm)	Power W^/nm	Lumens (ϕ/nm)
360	0	NR	490	60	NR	620	277	NR	750	6	NR	880	0	NR
365	0	NR	495	87	NR	625	278	NR	755	5	NR	885	0	NR
370	0	NR	500	124	NR	630	1000	NR	760	4	NR	890	0	NR
375	0	NR	505	168	NR	635	623	NR	765	4	NR	895	0	NR
380	1	NR	510	209	NR	640	162	NR	770	3	NR	900	0	NR
385	1	NR	515	246	NR	645	158	NR	775	3	NR	905	0	NR
390	2	NR	520	273	NR	650	134	NR	780	2	NR	910	0	NR
395	4	NR	525	292	NR	655	109	NR	785	2	NR	915	0	NR
400	5	NR	530	305	NR	660	91	NR	790	2	NR	920	0	NR
405	7	NR	535	313	NR	665	75	NR	795	2	NR	925	0	NR
410	11	NR	540	319	NR	670	70	NR	800	1	NR	930	0	NR
415	21	NR	545	323	NR	675	56	NR	805	1	NR	935	0	NR
420	42	NR	550	326	NR	680	47	NR	810	1	NR	940	0	NR
425	76	NR	555	330	NR	685	41	NR	815	1	NR	945	0	NR
430	125	NR	560	333	NR	690	35	NR	820	1	NR	950	0	NR
435	193	NR	565	336	NR	695	30	NR	825	1	NR	955	0	NR
440	302	NR	570	336	NR	700	26	NR	830	1	NR	960	0	NR
445	432	NR	575	335	NR	705	22	NR	835	1	NR	965	0	NR
450	380	NR	580	332	NR	710	19	NR	840	0	NR	970	0	NR
455	213	NR	585	326	NR	715	16	NR	845	0	NR	975	0	NR
460	147	NR	590	319	NR	720	14	NR	850	0	NR	980	0	NR
465	104	NR	595	307	NR	725	12	NR	855	0	NR	985	0	NR
470	65	NR	600	299	NR	730	10	NR	860	0	NR	990	0	NR
475	50	NR	605	291	NR	735	9	NR	865	0	NR	995	0	NR
480	46	NR	610	317	NR	740	8	NR	870	0	NR	1000	0	NR
485	47	NR	615	336	NR	745	7	NR	875	0	NR			

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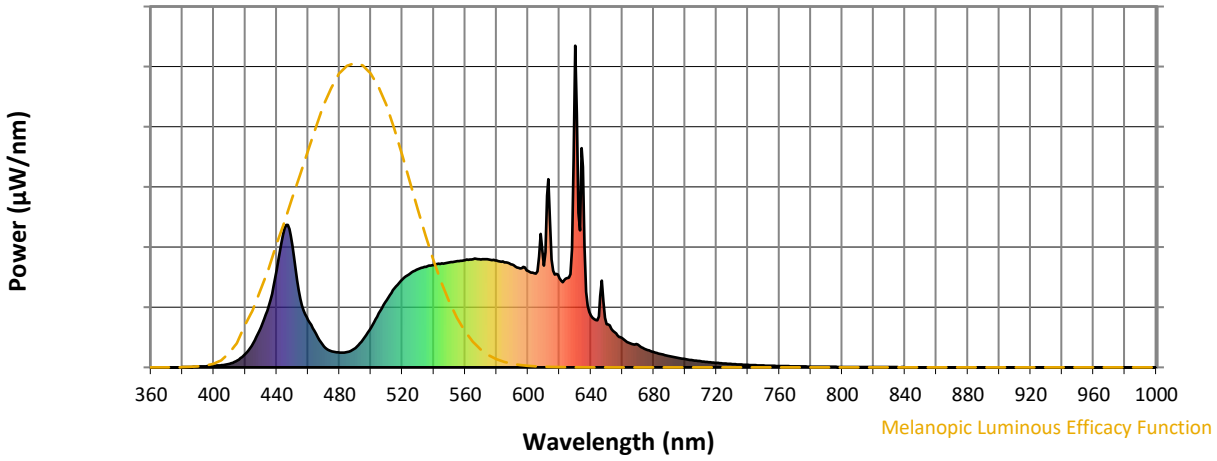
Melanopic Flux vs. Wavelength



Melanopic Lumens: NR **M/P: 2.99**

λ (nm)	Power W^/nm	Lumens (ϕ/nm)	λ (nm)	Power W^/nm	Lumens (ϕ/nm)	λ (nm)	Power W^/nm	Lumens (ϕ/nm)	λ (nm)	Power W^/nm	Lumens (ϕ/nm)	λ (nm)	Power W^/nm	Lumens (ϕ/nm)
360	0	NR	490	60	NR	620	277	NR	750	6	NR	880	0	NR
365	0	NR	495	87	NR	625	278	NR	755	5	NR	885	0	NR
370	0	NR	500	124	NR	630	1000	NR	760	4	NR	890	0	NR
375	0	NR	505	168	NR	635	623	NR	765	4	NR	895	0	NR
380	1	NR	510	209	NR	640	162	NR	770	3	NR	900	0	NR
385	1	NR	515	246	NR	645	158	NR	775	3	NR	905	0	NR
390	2	NR	520	273	NR	650	134	NR	780	2	NR	910	0	NR
395	4	NR	525	292	NR	655	109	NR	785	2	NR	915	0	NR
400	5	NR	530	305	NR	660	91	NR	790	2	NR	920	0	NR
405	7	NR	535	313	NR	665	75	NR	795	2	NR	925	0	NR
410	11	NR	540	319	NR	670	70	NR	800	1	NR	930	0	NR
415	21	NR	545	323	NR	675	56	NR	805	1	NR	935	0	NR
420	42	NR	550	326	NR	680	47	NR	810	1	NR	940	0	NR
425	76	NR	555	330	NR	685	41	NR	815	1	NR	945	0	NR
430	125	NR	560	333	NR	690	35	NR	820	1	NR	950	0	NR
435	193	NR	565	336	NR	695	30	NR	825	1	NR	955	0	NR
440	302	NR	570	336	NR	700	26	NR	830	1	NR	960	0	NR
445	432	NR	575	335	NR	705	22	NR	835	1	NR	965	0	NR
450	380	NR	580	332	NR	710	19	NR	840	0	NR	970	0	NR
455	213	NR	585	326	NR	715	16	NR	845	0	NR	975	0	NR
460	147	NR	590	319	NR	720	14	NR	850	0	NR	980	0	NR
465	104	NR	595	307	NR	725	12	NR	855	0	NR	985	0	NR
470	65	NR	600	299	NR	730	10	NR	860	0	NR	990	0	NR
475	50	NR	605	291	NR	735	9	NR	865	0	NR	995	0	NR
480	46	NR	610	317	NR	740	8	NR	870	0	NR	1000	0	NR
485	47	NR	615	336	NR	745	7	NR	875	0	NR			

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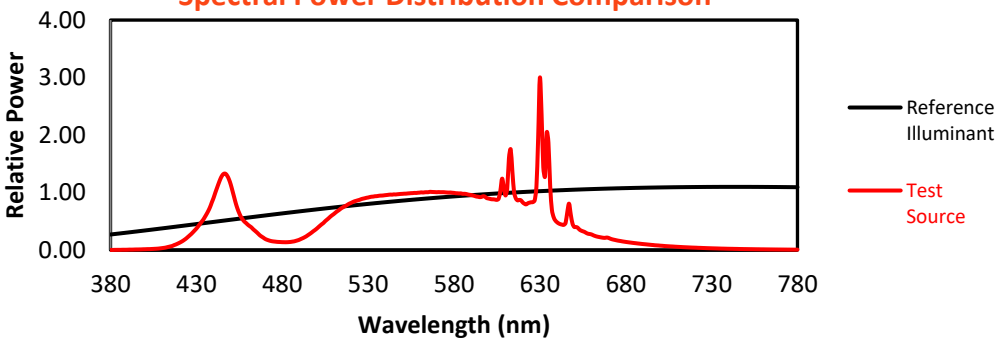
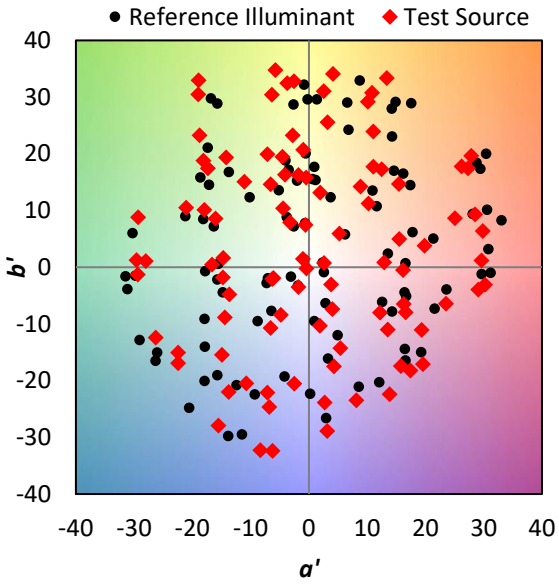
Summary

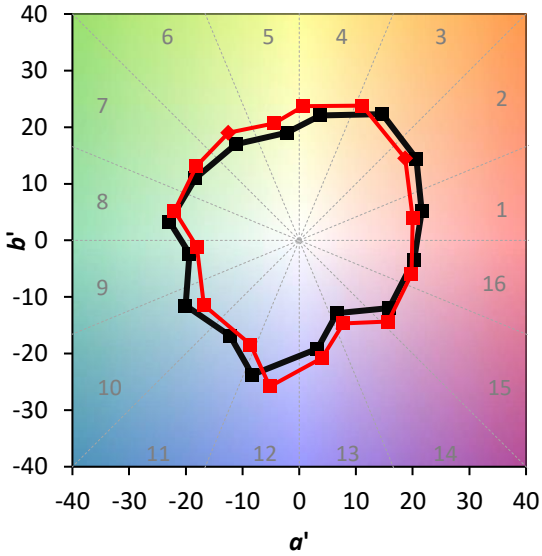
R_f = 80.7
R_g = 102.1
CIE R_a = 82.1
R_9 = 38.5

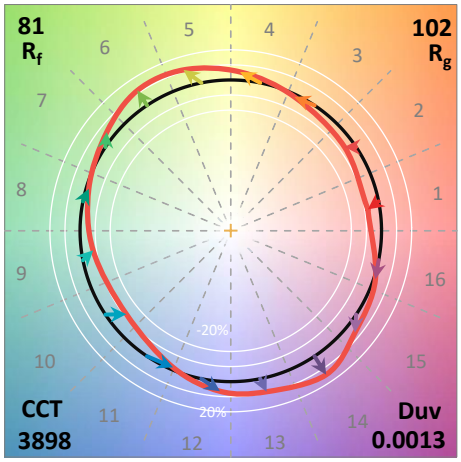
Spectral Power Distribution Comparison

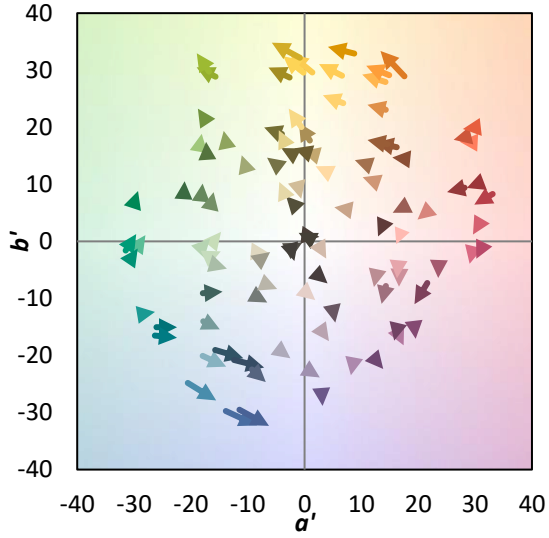


Color Vector Graphics









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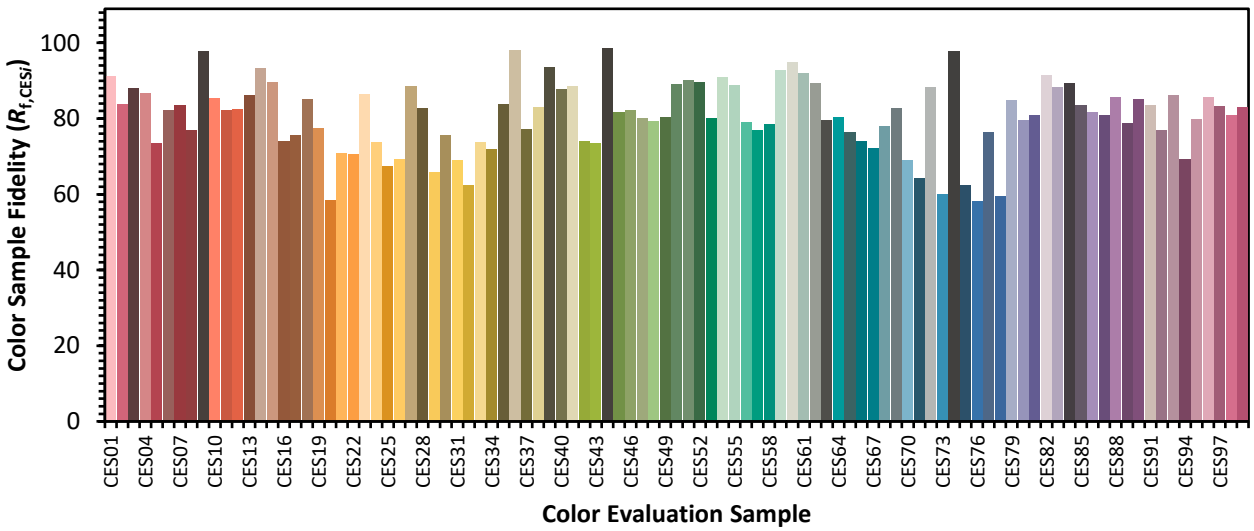
Individual Sample Fidelity Index ($R_{f,i}$)

CES01 = 85	CES26 = 69	CES51 = 90	CES76 = 58
CES02 = 61	CES27 = 89	CES52 = 90	CES77 = 76
CES03 = 31	CES28 = 83	CES53 = 80	CES78 = 60
CES04 = 69	CES29 = 66	CES54 = 91	CES79 = 85
CES05 = 48	CES30 = 76	CES55 = 89	CES80 = 79
CES06 = 50	CES31 = 69	CES56 = 79	CES81 = 81
CES07 = 41	CES32 = 62	CES57 = 77	CES82 = 91
CES08 = 40	CES33 = 74	CES58 = 79	CES83 = 88
CES09 = 29	CES34 = 72	CES59 = 93	CES84 = 89
CES10 = 74	CES35 = 84	CES60 = 95	CES85 = 84
CES11 = 57	CES36 = 98	CES61 = 92	CES86 = 82
CES12 = 63	CES37 = 77	CES62 = 89	CES87 = 81
CES13 = 43	CES38 = 83	CES63 = 80	CES88 = 86
CES14 = 74	CES39 = 94	CES64 = 80	CES89 = 79
CES15 = 71	CES40 = 88	CES65 = 77	CES90 = 85
CES16 = 47	CES41 = 89	CES66 = 74	CES91 = 83
CES17 = 49	CES42 = 74	CES67 = 72	CES92 = 77
CES18 = 56	CES43 = 73	CES68 = 78	CES93 = 86
CES19 = 71	CES44 = 98	CES69 = 83	CES94 = 69
CES20 = 65	CES45 = 82	CES70 = 69	CES95 = 80
CES21 = 86	CES46 = 82	CES71 = 64	CES96 = 86
CES22 = 78	CES47 = 80	CES72 = 88	CES97 = 83
CES23 = 91	CES48 = 79	CES73 = 60	CES98 = 81
CES24 = 90	CES49 = 80	CES74 = 98	CES99 = 83
CES25 = 71	CES50 = 89	CES75 = 62	



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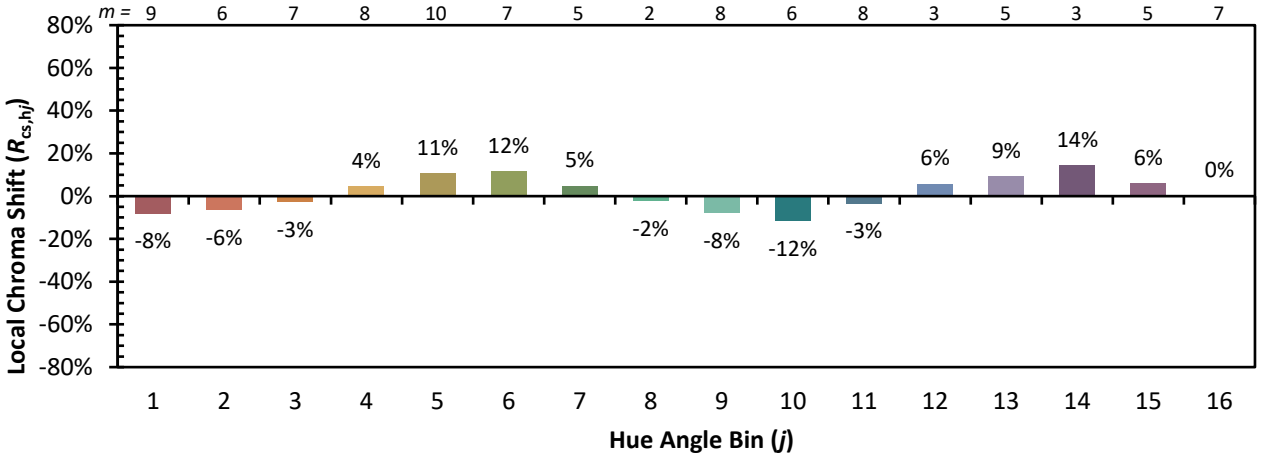
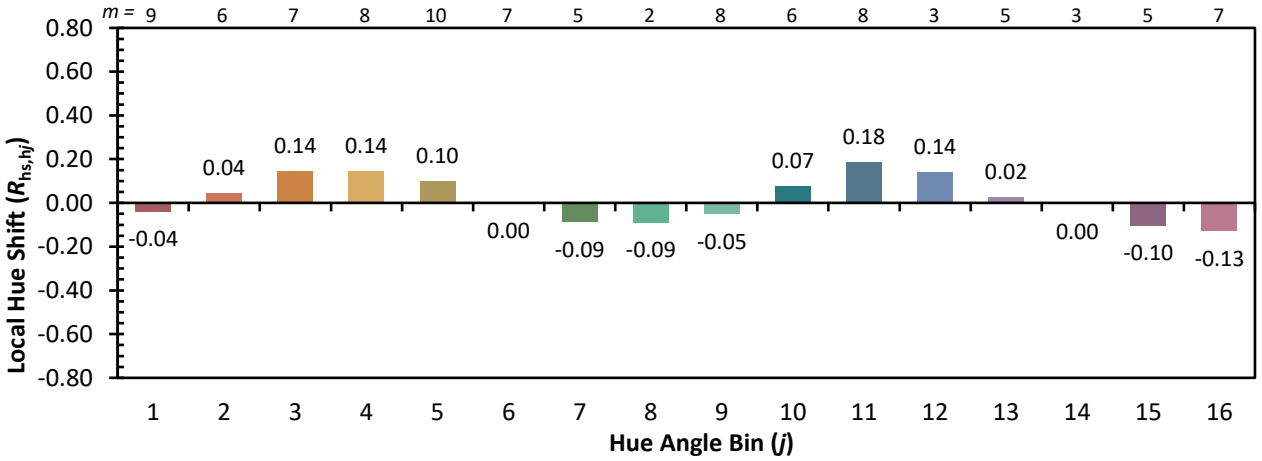
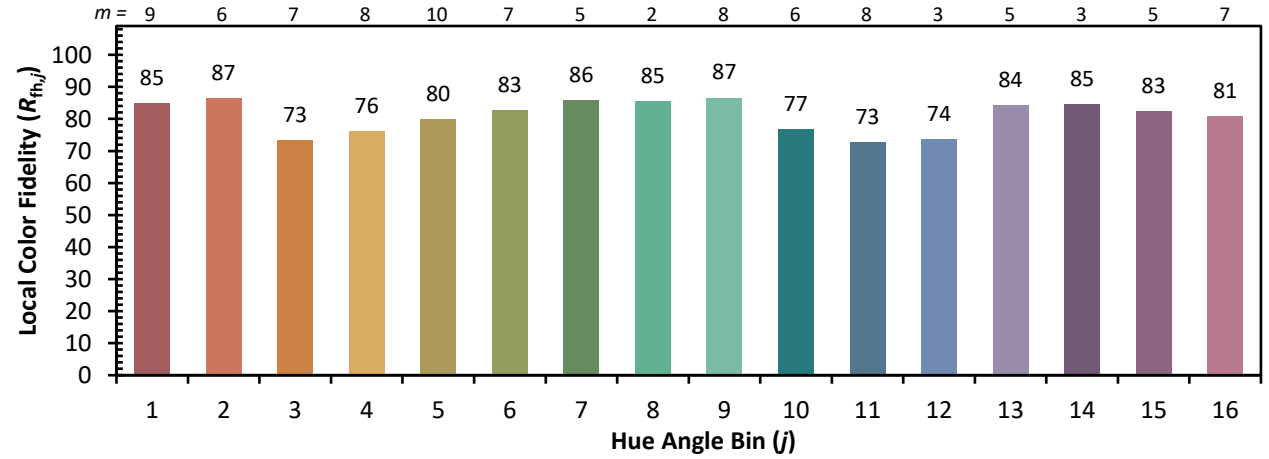
Color Rendition by Hue-Angle Bin







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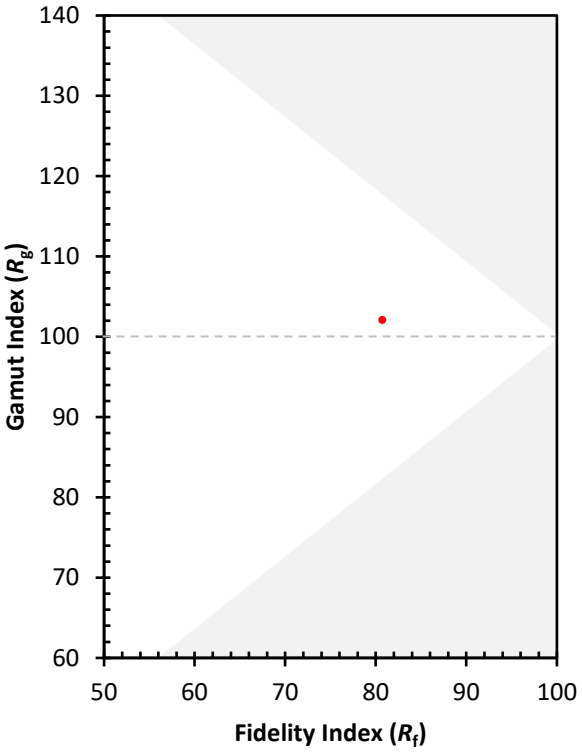
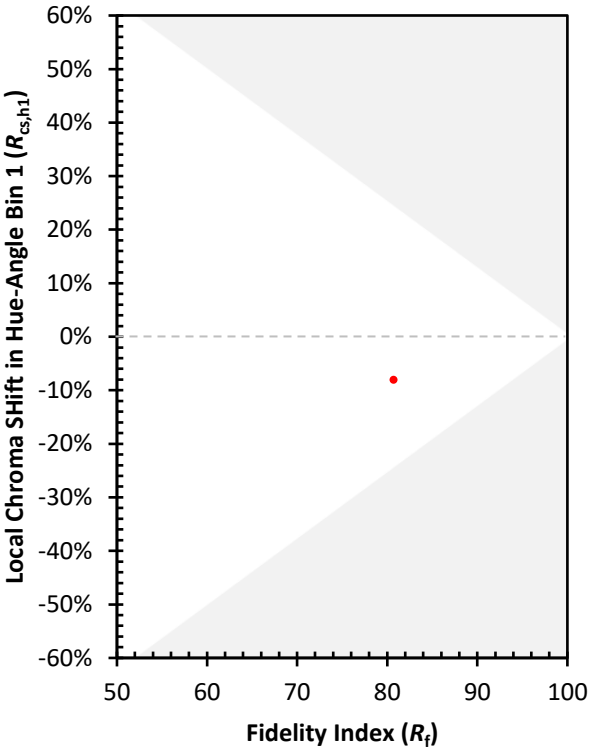
Measure Comparisons





(END OF REPORT)